

Strategic Goal: Sound Science, Improved Understanding of Environmental Risk, and Greater Innovation to Address Environmental Problems

EPA will develop and apply the best available science for addressing current and future environmental hazards, as well as new approaches toward improving environmental protection.

BACKGROUND AND CONTEXT

Science allows us to identify the most important sources of risk to human health and the environment, and thereby guides our priorities, policies, and deployment of resources. Science provides the understanding and technologies needed to detect, abate, and avoid environmental problems.

In the future, environmental problems will be addressed using those features of the current system that have proven effective and by designing and testing fundamentally new tools and approaches that utilize the latest advances in scientific knowledge and technology.

MEANS AND STRATEGY

EPA has several strategies to strengthen the scientific basis for environmental protection and develop innovations that will allow achievement of our strategic objectives. The Agency has implemented a risk-based research planning process to use risk assessment and risk management as principal priority-setting criteria. EPA conducts annual research program reviews to both evaluate the status and accomplishments of its research and determine strategic planning priorities.

In FY 2000, EPA will continue the Agency's Postdoctoral Initiative, begun in 1998, to enhance our intramural research program. These positions will provide a constant stream of highly-trained postdoctoral candidates who can apply state-of-the-science training to EPA research issues. For FY 2000, new post-doctoral candidates will be recruited to: (1) strengthen our ability to meet the scientific challenges of the next several years; (2) bring a fresh scientific perspective and new energy

to our highest priority research and development programs by working with experienced ORD Principal Investigators; (3) work in critically important areas such as human exposure modeling in particulate matter and ecological risk assessment; and (4) improve our workforce diversity. Post-doctoral resources are spread throughout the FY 2000 budget.

To better draw upon expertise of the environmental academic community, EPA created the Science to Achieve Results (STAR) Program of peer reviewed, mission-driven extramural grants. The Agency is also working with the National Research Council to identify emerging environmental issues for which we must begin planning the necessary research. EPA's research program will increase the understanding of environmental processes and the capability to assess environmental risks not only to human health, but also to ecosystems.

The emphasis of ecological monitoring research will shift from a Mid-Atlantic integrated assessment of ecosystem health to a Western Pilot demonstration of methods developed in the Mid-Atlantic. In addition, the Coastal Monitoring Initiative beginning in 2000 will fund the first national demonstration of the status and trends monitoring of the health of U.S. estuaries. Knowing the current conditions of these ecosystems, how best to measure those conditions, and what problems exist are important parts of this effort and will provide essential input to the modeling and assessment elements of the program. Process and modeling research will seek to explain stressors and their effect on an ecosystem, as well as the way in which they cause that effect.

EPA is also committed to developing and verifying innovative methods and models for assessing the susceptibilities of populations to environmental agents, aimed at enhancing current risk assessment and management strategies and guidance. In response to the heightened awareness and concern over children's health risks and the provisions of the new legislation on food safety, EPA established the Children's Health Research Program. In collaboration with the National Institute for Environmental Health Sciences (NIEHS), EPA has established eight university-based research centers to study the unique environmental risks that threaten the health of our children, with research focusing on childhood asthma and developmental disorders.

The 2000 research program includes plans to establish one additional center focused on children's health research to conduct basic and applied research in combination with community-based prevention efforts that focus on identifying and preventing environment-related diseases in children.

This center will look at non-asthma related research issues including developmental disorders. Agency research efforts for asthma are part of the interagency work under the President's Task Force

on Environmental Health Risks and Safety Risks to Children.

The Agency will establish research capability and mechanisms to anticipate and identify environmental or other changes that may portend future risk. A clear vision of future environmental risk will enable EPA to manage strategically for tomorrow and tactically for today. Substantial capability to discern early warnings and patterns of change will be developed through work undertaken on endocrine disruptors. Benefits will include an improved framework for decision-making, increased ability to anticipate and perhaps deter serious environmental risks, and enhanced communication with the public and other stakeholders.

In order to promote decisions which place pollution prevention as the first solution among many, research will focus on the development of methods and decision tools that are more quantitative and easier for stakeholders and decision-makers to use than those currently available. Research on pollution prevention technology and approaches will accelerate the adoption and incorporation of pollution prevention by developing, testing, and demonstrating techniques applicable across economic sectors. This research will test the ability of risk assessors and risk managers to develop tools and methodologies which are meaningful and understandable to the public in terms of the costs and benefits associated with the magnitude of the risk reduction options.

A key element of EPA's strategy for reinvention is testing and adopting innovative policy tools designed to achieve better protection at less cost. The Agency has a number of new tools and approaches that are being tested or implemented in various environmental programs, including: market trading and banking, third party certification of environmental performance, and recognition and incentives for environmental stewardship. In each area, EPA is looking to advance the application of

the innovative tool or approach by promoting broader testing and incorporation into our system of environmental protection. For example, EPA's Permit Action Plan outlines a broad strategy for building the next generation of environmental permitting. This strategy will harmonize requirements across media, and will make permitting more accessible to the public and more flexible for facilities.

Sector strategies complement current EPA activities by allowing the Agency to approach issues more holistically; tailor efforts to the particular characteristics of each sector; identify related groups of stakeholders with interest in a set of issues; link EPA's efforts with those of other agencies; and craft new approaches to environmental protection.

Sustainable industry programs serve as incubators and developers of innovative approaches to environmental policy making, testing alternative regulatory and programmatic approaches through regional projects, and multi-stakeholder processes. The experience gained in working with six industry sectors on the Common Sense Initiative provides the basis for moving forward with sector-based approaches to environmental protection.

Also, President Clinton created Project XL in March 1995 to provide regulated entities and other stakeholders with the opportunity to develop and implement alternative environmental management strategies that achieve superior environmental performance in exchange for regulatory flexibility. Sector-based approaches will offer valuable supplements to traditional environmental policy and may become the predominant means for environmental protection in the 21st century.

Nearly 7,000 businesses, trade association, citizens groups, state and local governments, and universities are volunteering to improve environmental performance in a timely, cost-effective way through an array of EPA partnership programs. Known collectively as Partners for the Environment, these programs complement traditional regulatory approaches to environmental protection.

Partners set practical, meaningful goals to improve and better protect the environment -- from conserving water and energy to reducing hazardous emissions, waste, and pesticide risks. These efforts are good for the environment, make good business sense, and prove that pollution prevention pays.

EXTERNAL FACTORS

Sound science is predicated on the desire of the Agency to make human health and environmental decisions based on sound scientific data and information. It challenges the Agency to apply the moves the Agency to a more integrated, efficient, and effective approach of reducing risks to both human health and the environment. As long as

best available science and technical analysis when addressing health and environmental problems that adversely impact the United States. Such a challenge

sound science is a central tenet for actions taken by the Agency, then external factors will have a minimal impact on the goal.

Resource Summary

(Dollars in Thousands)

	FY 1999 Enacted	FY 2000 Request	FY 2000 Req. v. FY 1999 Ena.
Sound Science, Improved Understanding of Env. Risk and Greater Innovation to Address Env. Problems			
Research for Ecosystem Assessment and Restoration	\$111,978.7	\$118,553.3	\$6,574.6
Science & Technology	\$111,978.7	\$118,112.7	\$6,134.0
Hazardous Substance Superfund	\$0.0	\$440.6	\$440.6
Research for Human Health Risk Assessment	\$50,573.7	\$56,229.1	\$5,655.4
Environmental Program & Management	\$18.8	\$19.5	\$0.7
Science & Technology	\$50,554.9	\$55,705.6	\$5,150.7
Hazardous Substance Superfund	\$0.0	\$504.0	\$504.0
Research to Detect Emerging Risk Issues	\$56,648.8	\$49,806.9	(\$6,841.9)
Environmental Program & Management	\$7,214.4	\$7,512.7	\$298.3
Science & Technology	\$49,434.4	\$42,290.4	(\$7,144.0)
Hazardous Substance Superfund	\$0.0	\$3.8	\$3.8
Pollution Prevention and New Technology for Environmental Protections	\$77,286.3	\$55,801.7	(\$21,484.6)
Environmental Program & Management	\$857.0	\$386.6	(\$470.4)
Science & Technology	\$76,429.3	\$54,101.9	(\$22,327.4)
Hazardous Substance Superfund	\$0.0	\$1,313.2	\$1,313.2
Increase Use of Integrated, Holistic, Partnership Approaches	\$16,390.5	\$16,663.8	\$273.3
Environmental Program & Management	\$16,390.5	\$16,663.8	\$273.3

Resource Summary (cont.)	FY 1999 Enacted	FY 2000 Request	FY 2000 Req. v. FY 1999 Ena.
Increase Opportunities for Sector Based Approaches	\$21,091.9	\$10,018.5	(\$11,073.4)
Environmental Program & Management	\$20,156.9	\$9,983.5	(\$10,173.4)
Science & Technology	\$900.0	\$0.0	(\$900.0)
Hazardous Substance Superfund	\$35.0	\$35.0	\$0.0
Regional Enhancement of Ability to Quantify Environmental Outcomes	\$6,505.5	\$7,659.8	\$1,154.3
Environmental Program & Management	\$3,407.6	\$4,371.6	\$964.0
Hazardous Substance Superfund	\$3,097.9	\$3,288.2	\$190.3
Science Advisory Board Peer Review	\$2,486.7	\$2,636.2	\$149.5
Environmental Program & Management	\$2,486.7	\$2,636.2	\$149.5
Incorporate Innovative Approaches to Environmental Management	\$4,034.1	\$4,378.1	\$344.0
Environmental Program & Management	\$4,034.1	\$4,378.1	\$344.0
Total Workyears:	1,194.2	1,187.3	-6.9

Strategic Objectives: Research for Ecosystem Assessment and Restoration

By 2008, provide the scientific understanding to measure, model, maintain, or restore, at multiple scales, the integrity and sustainability of ecosystems now and in the future.

Key Programs

(Dollars in Thousands)

	FY 1999 Enacted	FY 2000 Request
Clean Water Action Plan - Related Research	\$1,406.0	\$4,689.3
Coastal Environmental Monitoring	\$0.0	\$6,549.0
Endocrine Disruptor Research	\$0.0	\$927.7
Environmental Monitoring and Assessment Program, EMAP	\$33,255.0	\$33,955.0

Annual Performance Goals and Measures

In 1999 Analyze existing monitoring data for acid deposition and UVB and implement a multiple site UVB monitoring system for measuring status and trends

Performance Measures:

Publish an analysis of the trends in atmospheric deposition and aquatic effects.

FY 1999

30-SEP-1999

MONITORING FINDINGS IN THE MID-ATLANTIC

In 2000 By 2000; Report on monitoring findings in the Mid-Atlantic Region as a cost effective means of measuring the condition of these systems.

Performance Measures:	FY 1999	FY 2000
Final report and data base on landscape change in the Mid-Atlantic states between the early 1970s and the early 1990s, based on remotely sensed monitoring data, and the consequences for water quality		1 report, database
A final report on the extent and magnitude of fish tissue contamination in small, wadeable streams in the Mid-Atlantic Region as means of identifying high risk areas.		1 final report
Final report on the relationship between macroinvertebrate & periphyton assemblages & chemical & physical stressors to verify the applicability of these biological indicators in the Mid-Atlantic.		1 report
Provide baseline landscape indicators for the Mid-Atlantic Region.	30-SEP-1999	
Reports on benthic and water quality indicators of condition in estuaries.	30-SEP-1999	
Publish an analysis of the trends in atmospheric deposition and aquatic effects.	30-SEP-1999	
Publish Mid-Atlantic region stressor profiles for ozone, acid deposition, pesticides, nitrogen and other stressors.	30-SEP-1999	
Baseline:	There is a need to undrstd curr conditions of surf wtrs & what stressors are closely assoc. w/ that condition in order to meas. pos. or neg. chngs in those systs, whether in resp. to stressors, mitigat., or restoration efforts. Dvlpmnt of "formal" bline info for EPA research is curr. undrwy.	

CONCEPTUAL MODEL FOR WATERSHED ASSESSMENT

In 1999 Provide ecological risk assessment case studies for two watersheds, final guidelines for reporting ecological risk assessment and ecological risk assessment guidance and support.

Performance Measures:	FY 1999
Final Guidelines for Ecological Risk Assessment	30-SEP-1999
Report to CENR on use of Ecological Risk Assessment in the Federal Government.	30-SEP-1999
Development and use of ecological information management system.	30-SEP-1999
Baseline:	There is a need to understand the relative risk posed to ecosystems by stressors, alone and in combination. Development of "formal" baseline information for EPA research is currently underway.

VERIFICATION AND VALIDATION OF PERFORMANCE MEASURES

EPA has several strategies to validate and verify performance measures in the area of environmental science and technology research. Because the major output of research is technical information, primarily in the form of reports, software, protocols, etc., key to these strategies is the performance of both peer reviews and quality reviews to ensure that requirements are met.

Peer reviews provide assurance during the pre-planning, planning, and reporting of environmental science and research activities that the work meets peer expectations. Only those science activities that pass agency peer review are addressed. This applies to program-level, project-level, and research outputs. The quality of the peer review activity is monitored by EPA to ensure that peer reviews are performed consistently, according to Agency policy, and that any identified areas of concern are resolved through discussion or the implementation of corrective action.

The Agency's expanded focus on peer review helps ensure that the performance measures listed here are verified and validated by an external organization. This is accomplished through the use of the Science Advisory Board (SAB) and the Board of Scientific Counselors (BOSC). The BOSC, established under the Federal Advisory Committee Act, provides an added measure of assurance by examining the way the Agency uses peer review, as well as the management of its research and development laboratories.

In 1998, the Agency presented a new Agency-wide quality system in Agency Order 5360.1/chg 1. This system provided policy to ensure that all environmental programs performed by or for the Agency be supported by individual quality systems that comply fully with the American

National Standard, *Specifications and Guidelines for Quality Systems for Environmental Data Collection and Environmental Technology Programs* (ANSI/ASQC E4-1994).

The order expanded the applicability of quality assurance and quality control to the design, construction, and operation by EPA organizations of environmental technology such as pollution control and abatement systems; treatment, storage, and disposal systems; and remediation systems. This rededication to quality provides the needed management and technical practices to assure that environmental data developed in research and used to support Agency decisions are of adequate quality and usability for their intended purpose.

A quality assurance system is implemented at all levels in the EPA research organization. The Agency-wide quality assurance system is a management system that provides the necessary elements to plan, implement, document, and assess the effectiveness of quality assurance and quality control activities applied to environmental programs conducted by or for EPA. This quality management system provides for identification of environmental programs for which QA/QC is needed, specification of the quality of the data required from environmental programs, and provision of sufficient resources to assure that an adequate level of QA/QC is performed.

Agency measurements are based on the application of standard EPA and ASTM methodology as well as performance-based measurement systems. Non-standard methods are validated at the project level. Internal and external management system assessments report the efficacy of the management system for quality of the data and the final research results. The quality assurance annual report and work plan submitted by each organizational unit provides an accountable

mechanism for quality activities. Continuous improvement in the quality system is accomplished

through discussion and review of assessment results.

STATUTORY AUTHORITIES

Federal Insecticide, Fungicide and Rodenticide Act (FIFRA)

Toxic Substances Control Act

Comprehensive Environmental Response, Compensation and Liability Act (CERCLA)

Resource Conservation and Recovery Act (RCRA)

The Clean Air Act Amendment

The Safe Drinking Water Act

Pollution Prevention Act (PPA)(42 U.S.C. 13101-13109)

Clean Water Act (CWA) Title I (33 U.S.C. 1251-1271).

Toxic Substances Control Act (TSCA) section 4 and 5 (15 U.S.C. 2603 and 2604).

Strategic Objective: Research for Human Health Risk Assessment

Provide the scientific basis for responding to a wide range of environmentally-driven human health problems by developing methods models, and data that have broad applicability.

Key Programs (Dollars in Thousands)

	FY 1999 Enacted	FY 2000 Request
Endocrine Disruptor Research	\$0.0	\$372.9
Human Health Research	\$50,323.8	\$55,705.6

Annual Performance Goals and Measures

EXPOSURES AND EFFECTS OF ENVIRONMENTAL CONTAMINANTS

In 1999 Produce First Generation Exposure Models Describing Residential Exposure to Pesticides

Performance Measures:

FY 1999

First Generation Residential Exposure Models

30-SEP-1999

Baseline:

Development of "formal" baseline information for EPA research is currently underway.

RISK ASSESSMENT GUIDANCE /REGIONAL ASSESSMENTS CONCERNING RISKS TO CHILDREN

In 2000 Develop risk assessment guidance and regional assessments concerning risks to children exposed to environmental contaminants.

Performance Measures:

FY 1999

FY 2000

Assess pesticide exposures to children in Washington, Minnesota, and Arizona.

1 assessment

Report on the use of mechanistic data in developmental toxicity risk

1 report

assessment.

Develop exposure factors handbook for children

1 Handbook

Baseline: Examination of the current methodologies and data bases revealed that many assessments are based on methods and data developed for adults. Assessment of data on the circumstances under which children are more susceptible than adults to environmental contaminants and how exposures differ need to be assembled for use in risk assessment, and methodologies specific to children need to be developed for use in routine risk assessment.

INNOVATIVE METHODS AND MODELS OF POPULATION OF SUSCEPTIBILITY

In 2008 Develop and verify innovative methods and models for assessing the susceptibilities of populations to environmental agents, aimed at enhancing risk assessment and management strategies and guidelines.

Performance Measures:

FY 1999

FY 2000

In 1999 award up to 10 peer reviewed STAR research grants that support studies to quantify the exposure of children to organophosphates, trazines and pyrethroids.

30-SEP-1999

Baseline: Development of "formal" baseline information for EPA research is currently underway.

VERIFICATION AND VALIDATION OF PERFORMANCE MEASURES

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monitored by EPA to ensure that peer reviews are performed consistently, according to Agency policy, and that any identified areas of concern are resolved through discussion or the implementation of corrective action.

The Agency's expanded focus on peer review helps ensure that the performance measures listed here are verified and validated by an external organization. This is accomplished through the use of the Science Advisory Board (SAB) and the Board of Scientific Counselors (BOSC). The BOSC, established under the Federal Advisory Committee Act, provides an added measure of assurance by examining the way the Agency uses peer review, as

well as the management of its research and development laboratories.

In 1998, the Agency presented a new Agency-wide quality system in Agency Order 5360.1/chg 1. This system provided policy to ensure that all environmental programs performed by or for the Agency be supported by individual quality systems that comply fully with the American National Standard, *Specifications and Guidelines for Quality Systems for Environmental Data Collection and Environmental Technology Programs* (ANSI/ASQC E4-1994).

The order expanded the applicability of quality assurance and quality control to the design, construction, and operation by EPA organizations of environmental technology such as pollution control and abatement systems; treatment, storage, and disposal systems; and remediation systems. This rededication to quality provides the needed management and technical practices to assure that environmental data developed in research and used to support Agency decisions are of adequate quality and usability for their intended purpose.

A quality assurance system is implemented at all levels in the EPA research organization. The

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STATUTORY AUTHORITIES

FIFRA of 1988

FFDCA of 1988

FQPA of 1996

TSCA of 1976

ERDDA of 1981

Strategic Objective: Emerging Risk Issues

Establish capability and mechanisms within EPA to anticipate and identify environmental or other changes that may portend future risk, integrate futures planning into ongoing programs, and promote coordinated preparation for and response for change.

Annual Performance Goals and Measures

EXTERNAL REVIEW DRAFT OF AQCD FOR CARBON MONOXIDE

In 1999 Complete and submit external review draft of the Air Quality Criteria Document for carbon monoxide.

Performance Measures:

FY 1999

Submit carbon monoxide AQCD external review draft to CASAC.

30-SEP-1999

Baseline: Development of "formal" baseline information for EPA research is currently underway.

RESEARCH ON ENDOCRINE DISRUPTING CHEMICALS

In 2000 Develop tools to identify hazards and formulate strategies to manage risks from exposure to endocrine disrupting chemicals capable of inducing adverse effects in humans and wildlife.

In 1999 Initiate Field Exposure Study of Children to 2 EDC's

Performance Measures:

FY 1999

FY 2000

Produce workshop report on the EDSTAC screening process for EDCs and determine application of the EDSTAC testing program for chemical hazard and risk assessment.

1 report

Characterization of environmental agents as risk factors in human prostate cancer.

1 characterize

Reports on endocrine and other effects in exposed women and their offspring in a cohort contaminated by PBBs.

2 report

Reports on the molecular mechanisms underlying estrogen receptor functions in ER knockout mice.

2 report

Development and refinement of test methods for use in Tier 1 testing of potential EDCs

2 methods

Development of amphibian assay for use in hazard identification.

1 assay

Protocol for field exposure study of children to 2 EDC's

30-SEP-1999

Baseline: Health effects and exposure studies are needed to develop the conclusive evidence that humans and ecosystems are at significant risk due to exposure to EDCs. Given these needs, EPA research will provide one or more methods to identify chemicals with the potential to disrupt endocrine systems in humans and/or wildlife.

VERIFICATION AND VALIDATION OF PERFORMANCE MEASURES

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STATUTORY AUTHORITIES

Clean Air Act (CAA) and amendments

Environmental Research, Development and Demonstration Act (ERDDA)

Federal Insecticide, Fungicide and Rodenticide Act (FIFRA)

Toxic Substances Control Act (TSCA)

Food Quality Protection Act (FQPA) of 1996

Safe Drinking Water Act (SDWA) and amendments

Strategic Objective: Pollution Prevention and New Technology

By 2006, develop and verify improved tools, methodologies, and technologies for modeling, measuring, characterizing, preventing, controlling, and cleaning up contaminants associated with high priority human health and environmental problems.

Key Programs (Dollars in Thousands)

	FY 1999 Enacted	FY 2000 Request
Common Sense Initiative	\$867.0	\$621.8
Advanced Measurement Initiative (AMI)	\$0.0	\$0.0
Environmental Technology Verification (ETV)	\$6,990.5	\$7,749.5

Annual Performance Goals and Measures

COMPUTER-BASED TOOLS AND PROOF-OF-PROCESS STRUCTURE

In 2000 Complete development of one or more computer-based tools which simulate product, process, or system design changes, and complete proof-of-process structure for one or more generic technologies (appl. to >1 env. problem) to prevent or reduce pollution in chemicals and industrial processes.

Performance Measures:

FY 1999

FY 2000

Complete dev. of the PARIS II Software, a tool to design env. benign solvents, & complete dev. & integration of WAR Algorithm, v 1.0, into a commercially available chemical process simulator

09/30/2000
software

Complete BETA testing of decision support tool for life cycle analysis of municipal solid waste management options.

09/30/2000 tool

Baseline:

Currently, the software tools which are available to assist users in finding environmentally benign replacement solvents utilize primitive decision criteria, and as such are limited solving problems involving single chemical solvents. Current software is unable to utilize detailed information regarding the underlying chemical properties of solvents and is unable to assist users in finding replacements for custom designed solvents which consist of complex chemical mixtures.

FINE PARTICULATE MODEL

In 1999 Improve Computational Efficiency of Fine Particulate Model by 25%.

Performance Measures:

Complete parallel algorithms for aerosol dynamics.

FY 1999

30-SEP-1999

FY 2000

Baseline:

Development of "formal" baseline information for EPA research is currently underway.

VERIFICATION AND VALIDATION OF PERFORMANCE MEASURES

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development laboratories.

In 1998, the Agency presented a new Agency-wide quality system in Agency Order 5360.1/chg 1. This system provided policy to ensure that all environmental programs performed by or for the Agency be supported by individual quality systems that comply fully with the American National Standard, *Specifications and Guidelines for Quality Systems for Environmental Data Collection and Environmental Technology Programs* (ANSI/ASQC E4-1994).

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Agency measurements are based on the application of standard EPA and ASTM methodology as well as performance-based

measurement systems. Non-standard methods are validated at the project level. Internal and external management system assessments report the efficacy of the management system for quality of the data and the final research results. The quality assurance annual report and work plan submitted by each organizational unit provides an accountable mechanism for quality activities. Continuous improvement in the quality system is accomplished through discussion and review of assessment results.

STATUTORY AUTHORITIES

Clean Air Act

The Safe Drinking Water Act

The Clean Water Act

The Toxic Substances Control Act

The Federal Insecticide, Fungicide, and Rodenticide Act

The Resources Conservation and Recovery Act

Superfund Amendments Reauthorization Act

Clean Air Act Amendments of 1990

Pollution Prevention Act of 1990

Strategic Objective: Increase Use of Integrated, Holistic, Partnership Approaches

By 2005, EPA will increase the number of places using integrated, holistic, partnership approaches, such as community-based environmental protection (CBEP), and quantify their tangible and sustainable environmental results in places where EPA is directly involved.

Key Programs (Dollars in Thousands)

	FY 1999 Request	FY 1999 Enacted	FY 2000 Request
Sustainable Development Challenge Grants *	\$0.0	\$4,701.8	\$4,714.8
Regional Geographic Program	\$12,045.0	\$8,070.6	\$11,780.5

* The Sustainable Development Challenge Grants program was transferred from Goal 1, Objective 1 and Goal 2, Objective 3 in 1999.

STATUTORY AUTHORITIES

Section 103(b)(3) of the Clean Air Act

Section 104(b)(3) of the Clean Air Act

Section 1442(c)(3) of the Safe Drinking Act

Section 10 of the Toxic Substances Control Act

Section 8001 of the Resource Conservation and Recovery Act

Section 20 of the Federal Insecticide, Fungicide, and Rodenticide Act

Multi-media

Strategic Objective: Increase Opportunities for Sector Based Approaches

By 2005, test innovative facility- and sector-based strategies to achieve improved environmental protection, and make successful approaches broadly available.

Key Programs (Dollars in Thousands)

	FY 1999 Enacted	FY 2000 Request
Project XL	\$3,359.9	\$3,454.4
Common Sense Initiative	\$3,812.5	\$2,133.7

Annual Performance Goals and Measures

PROJECT XL

In 2000 All 50 Project XL projects will be implemented.

In 1999 By 1999, a total of 50 Project XL projects will be in development or implementation, an increase of 23 over 1998.

Performance Measures:	FY 1999	FY 2000
Number of Project XL projects in implementation	50 projects	50 projects

Baseline: In 1998, the Agency had 27 XL projects in development or implementation (cumulative number). In 1999, it is anticipated that a total of 50 XL projects agreements will be in the development or implementation phases. All 50 projects will be in implementation in 2000.

VERIFICATION AND VALIDATION OF PERFORMANCE MEASURES

The Office of Reinvention will maintain records on the number of Project XL project agreements that have been completed, as well as the number of projects that are in implementation.

Performance targets for the National Metal Finishing Strategic Goals Program will be verified by milestones of program implementation (number of participating facilities, establishment of state goals programs, etc) and by data from the various tracking and bench marking systems. These systems are being set up to quantitatively measure facility progress toward the resource utilization and environmental protection goals in the program, burden reduction goals for facilities and other

stakeholders, and completion of Action Plan commitments for all stakeholders. The Goals Program will be the first national sector program to be able to measure and verify progress toward performance goals.

The success of all other sector-based and Sustainable Industry Program activities will be verified by the implementation of sector-specific policies, projects, and programmatic changes; the growing support of opinion leaders and other stakeholders; and performance measurement efforts that will demonstrate the effectiveness of this program in achieving cleaner, cheaper, and smarter environmental performance in selected sectors.

STATUTORY AUTHORITIES

National Environmental Policy Act

The Economy Act of 1932

TSCA sections 4, 5, and 6 (15 U.S.C. 2603, 2604, and 2605)

PPA (42 U.S.C. 13101-13109)

CWA

CAA

RCRA

Strategic Objective: Regional Enhancement of Ability to Quantify Environmental Outcomes

Key Programs (Dollars in Thousands)

	FY 1999 Enacted	FY 2000 Request
Regional Science and Technology	\$6,021.0	\$7,659.8

STATUTORY AUTHORITIES

Multi-media

Strategic Objective: Science Advisory Board Peer Review

STATUTORY AUTHORITIES

Federal Advisory Committee Act (5 U.S.C. App.)

Strategic Objective: Incorporate Innovative Approaches to Environmental Management

Key Programs

(Dollars in Thousands)

	FY 1999 Enacted	FY 2000 Request
Reinvention Programs, Development and Coordination	\$4,334.1	\$4,378.1

STATUTORY AUTHORITIES

Multi-media